FIG. 1

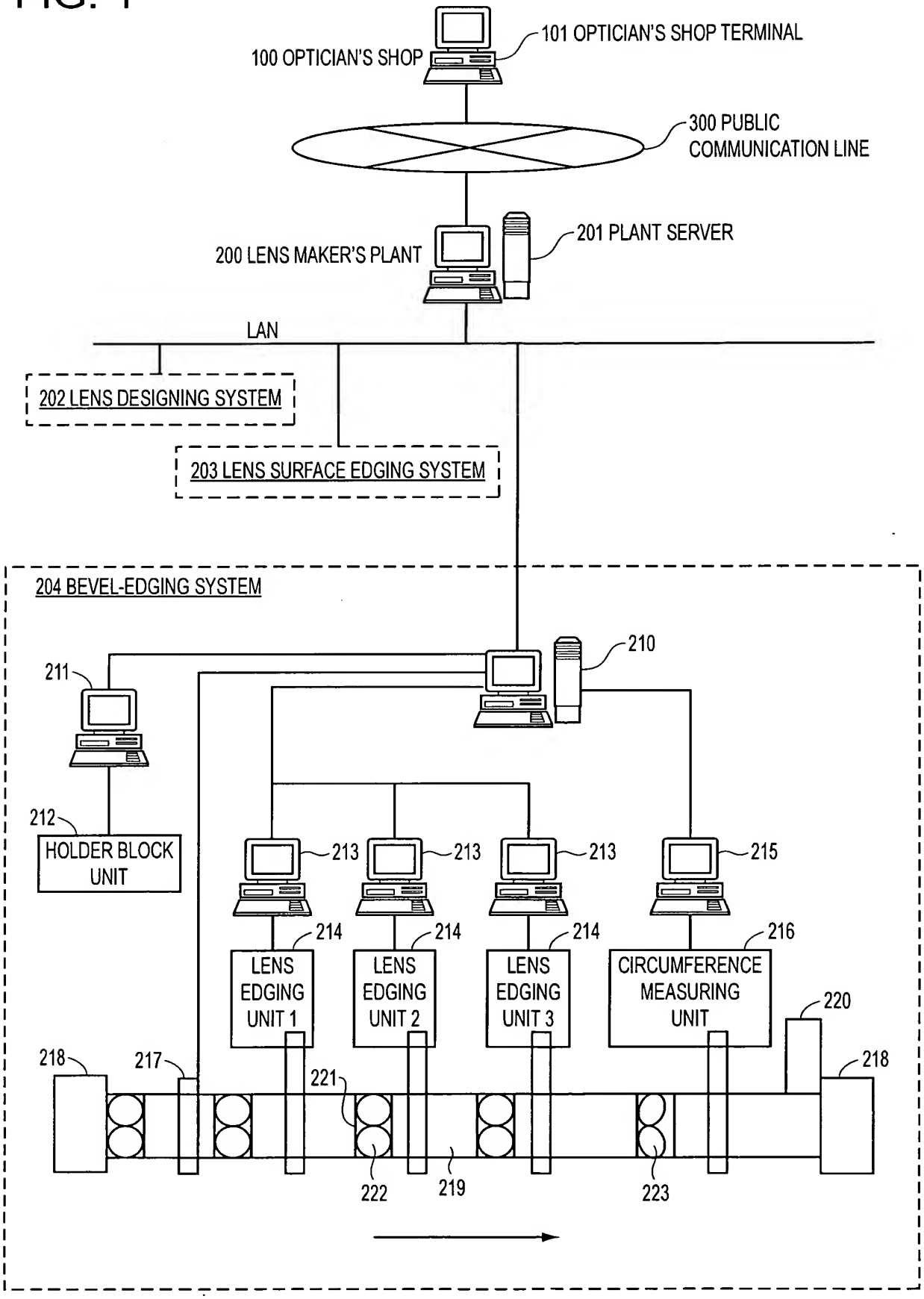

100 OPTICIAN'S SHOP
101 OPTICIAN'S SHOP TERMINAL
300 PUBLIC COMMUNICATION LINE
200 LENS MAKER'S PLANT
201 PLANT SERVER
LAN
202 LENS DESIGNING SYSTEM
203 LENS SURFACE EDGING SYSTEM
204 BEVEL-EDGING SYSTEM
210
211
212
HOLDER BLOCK UNIT
213
213
213
215
214
214
214
216
LENS EDGING UNIT 1
LENS EDGING UNIT 2
LENS EDGING UNIT 3
CIRCUMFERENCE MEASURING UNIT
220
218
217
221
218
222
219
223

FIG. 2

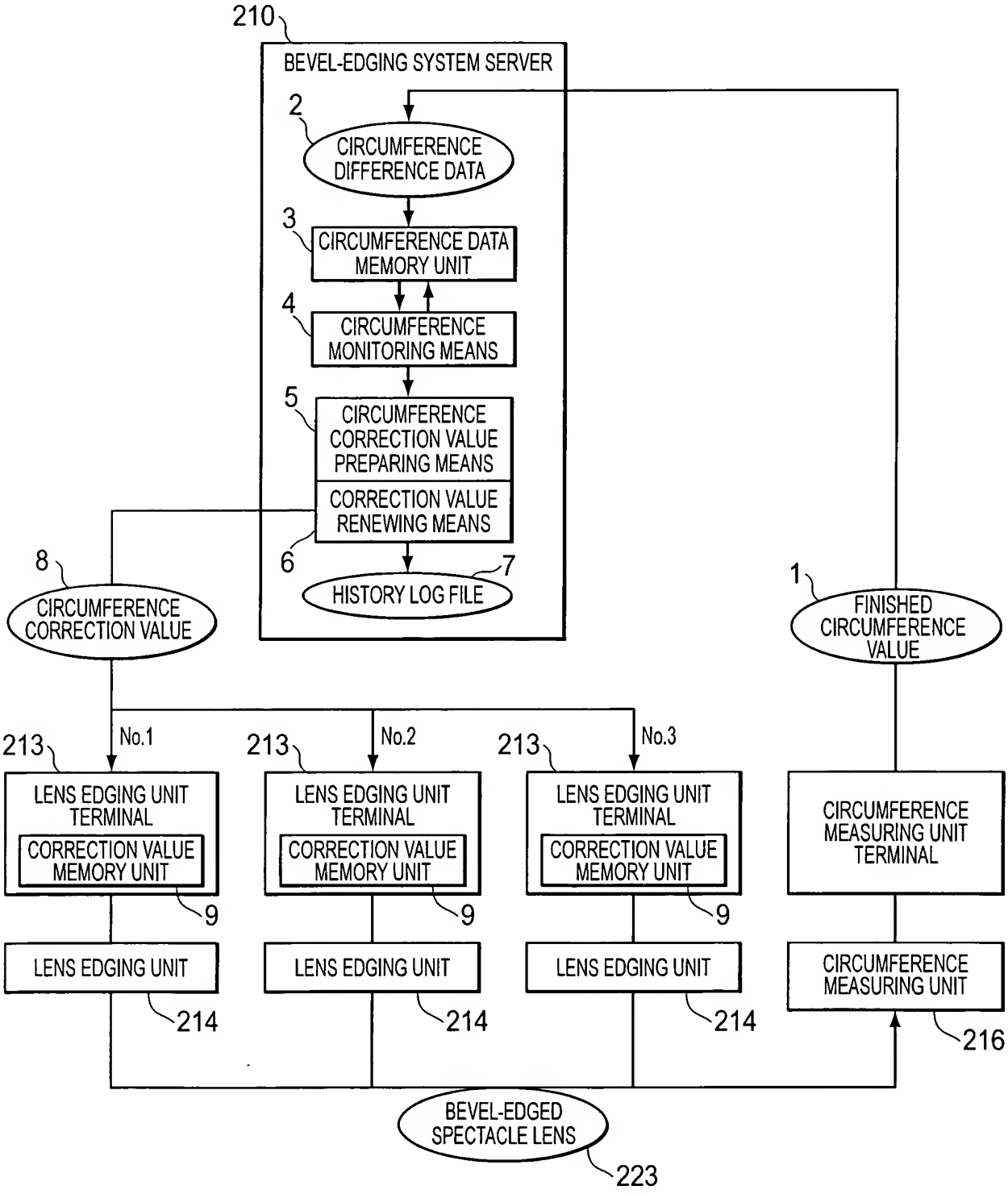

210
BEVEL-EDGING SYSTEM SERVER
2
CIRCUMFERENCE DIFFERENCE DATA
3
CIRCUMFERENCE DATA MEMORY UNIT
4
CIRCUMFERENCE MONITORING MEANS
5
CIRCUMFERENCE CORRECTION VALUE PREPARING MEANS
CORRECTION VALUE RENEWING MEANS
6
7
HISTORY LOG FILE
8
CIRCUMFERENCE CORRECTION VALUE
1
FINISHED CIRCUMFERENCE VALUE
No.1
No.2
No.3
213
213
213
LENS EDGING UNIT TERMINAL
CORRECTION VALUE MEMORY UNIT
9
LENS EDGING UNIT
214
CIRCUMFERENCE MEASURING UNIT TERMINAL
CIRCUMFERENCE MEASURING UNIT
216
BEVEL-EDGED SPECTACLE LENS
223

FIG. 3

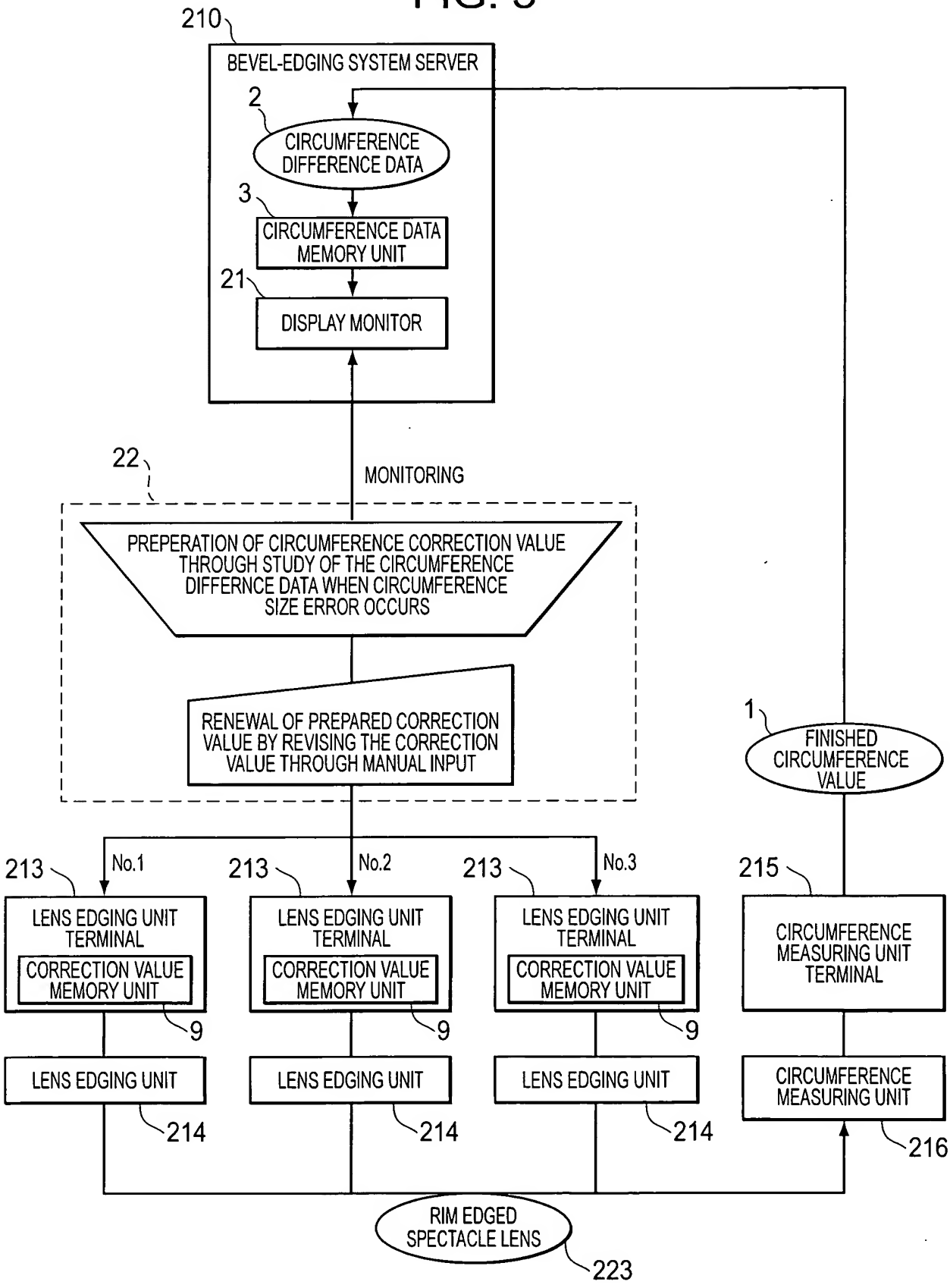
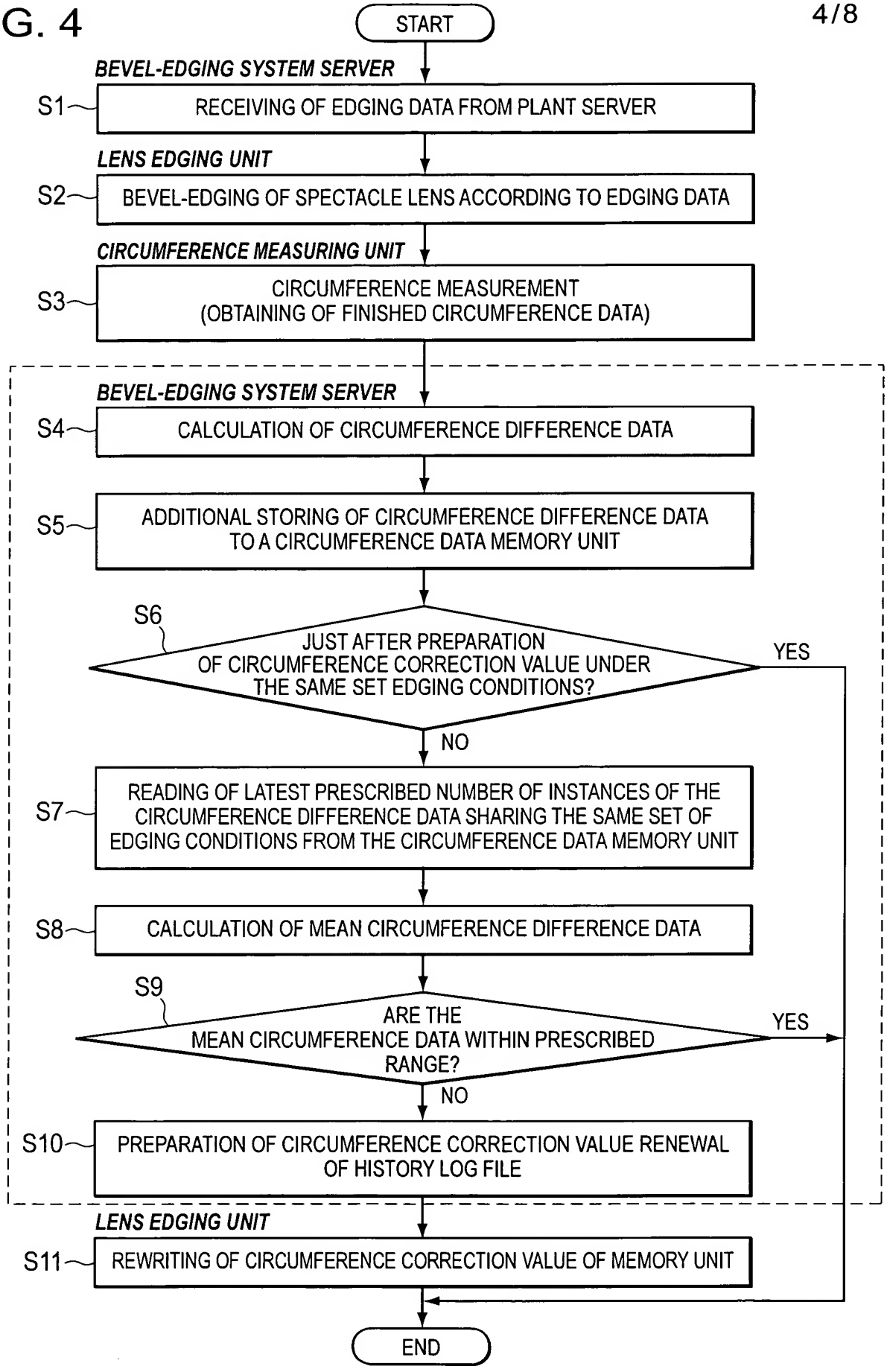

210
BEVEL-EDGING SYSTEM SERVER
2
CIRCUMFERENCE DIFFERENCE DATA
3
CIRCUMFERENCE DATA MEMORY UNIT
21
DISPLAY MONITOR
22
MONITORING
PREPERATION OF CIRCUMFERENCE CORRECTION VALUE THROUGH STUDY OF THE CIRCUMFERENCE DIFFERNCE DATA WHEN CIRCUMFERENCE SIZE ERROR OCCURS
RENEWAL OF PREPARED CORRECTION VALUE BY REVISING THE CORRECTION VALUE THROUGH MANUAL INPUT
1
FINISHED CIRCUMFERENCE VALUE
213
No.1
LENS EDGING UNIT TERMINAL
CORRECTION VALUE MEMORY UNIT
9
LENS EDGING UNIT
214
213
No.2
LENS EDGING UNIT TERMINAL
CORRECTION VALUE MEMORY UNIT
9
LENS EDGING UNIT
214
213
No.3
LENS EDGING UNIT TERMINAL
CORRECTION VALUE MEMORY UNIT
9
LENS EDGING UNIT
214
215
CIRCUMFERENCE MEASURING UNIT TERMINAL
CIRCUMFERENCE MEASURING UNIT
216
RIM EDGED SPECTACLE LENS
223

FIG. 4


START
BEVEL-EDGING SYSTEM SERVER
S1
RECEIVING OF EDGING DATA FROM PLANT SERVER
LENS EDGING UNIT
S2
BEVEL-EDGING OF SPECTACLE LENS ACCORDING TO EDGING DATA
CIRCUMFERENCE MEASURING UNIT
S3
CIRCUMFERENCE MEASUREMENT
(OBTAINING OF FINISHED CIRCUMFERENCE DATA)
BEVEL-EDGING SYSTEM SERVER
S4
CALCULATION OF CIRCUMFERENCE DIFFERENCE DATA
S5
ADDITIONAL STORING OF CIRCUMFERENCE DIFFERENCE DATA
TO A CIRCUMFERENCE DATA MEMORY UNIT
S6
JUST AFTER PREPARATION
OF CIRCUMFERENCE CORRECTION VALUE UNDER
THE SAME SET EDGING CONDITIONS?
YES
NO
S7
READING OF LATEST PRESCRIBED NUMBER OF INSTANCES OF THE
CIRCUMFERENCE DIFFERENCE DATA SHARING THE SAME SET OF
EDGING CONDITIONS FROM THE CIRCUMFERENCE DATA MEMORY UNIT
S8
CALCULATION OF MEAN CIRCUMFERENCE DIFFERENCE DATA
S9
ARE THE
MEAN CIRCUMFERENCE DATA WITHIN PRESCRIBED
RANGE?
YES
NO
S10
PREPARATION OF CIRCUMFERENCE CORRECTION VALUE RENEWAL
OF HISTORY LOG FILE
LENS EDGING UNIT
S11
REWRITING OF CIRCUMFERENCE CORRECTION VALUE OF MEMORY UNIT
END

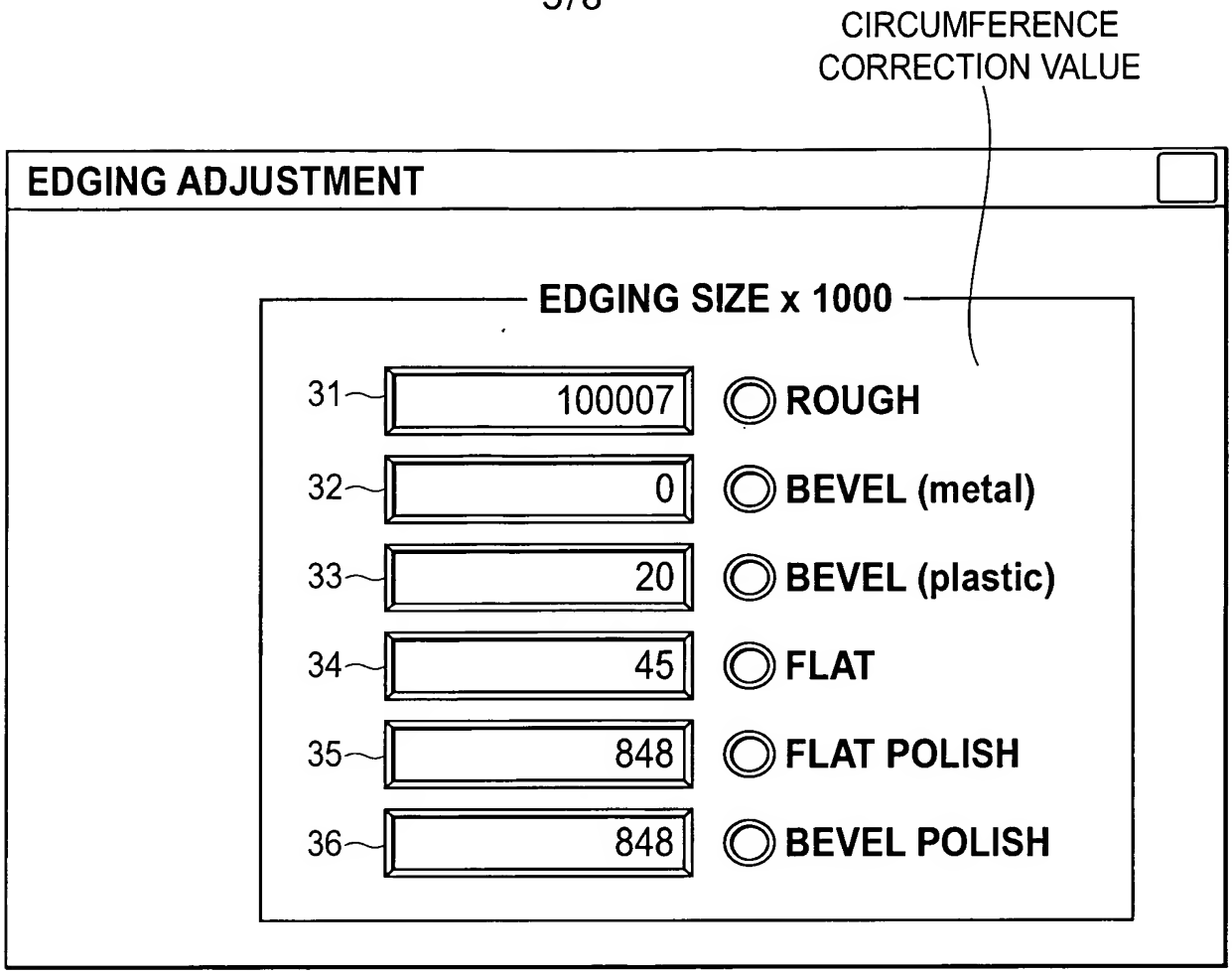

CIRCUMFERENCE CORRECTION VALUE
EDGING ADJUSTMENT
EDGING SIZE x 1000
31
100007
ROUGH
32
0
BEVEL (metal)
33
20
BEVEL (plastic)
34
45
FLAT
35
848
FLAT POLISH
36
848
BEVEL POLISH

FIG. 5

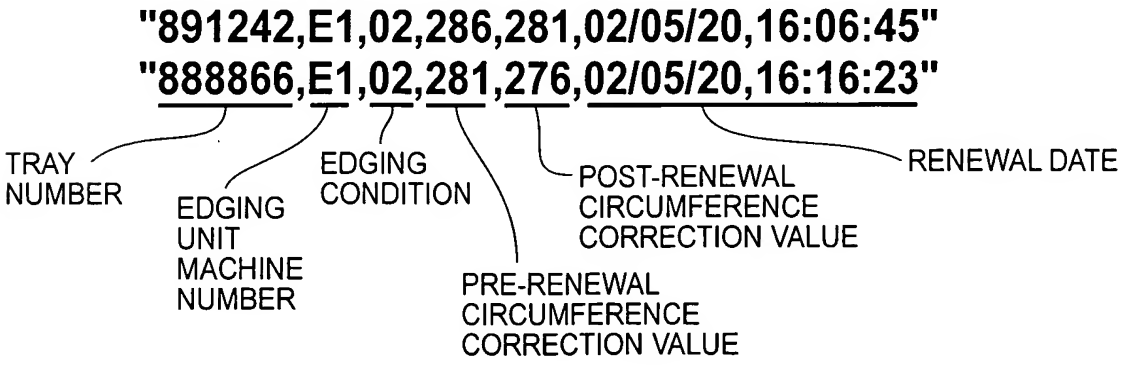

"891242,E1,02,286,281,02/05/20,16:06:45"
"888866,E1,02,281,276,02/05/20,16:16:23"
TRAY NUMBER
EDGING UNIT MACHINE NUMBER
EDGING CONDITION
PRE-RENEWAL CIRCUMFERENCE CORRECTION VALUE
POST-RENEWAL CIRCUMFERENCE CORRECTION VALUE
RENEWAL DATE

FIG. 6

FIG. 7

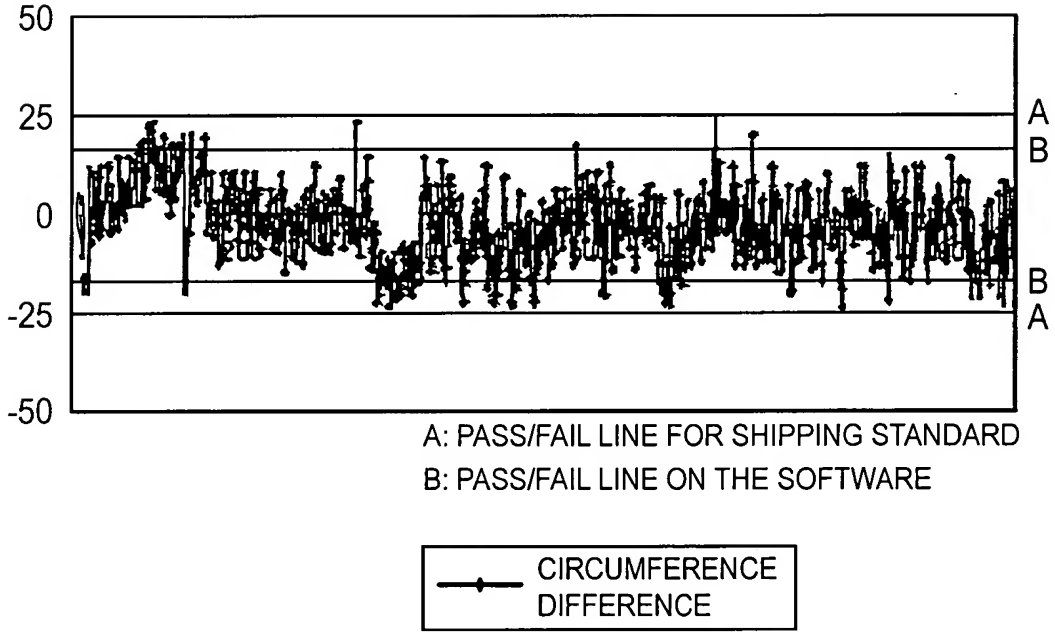
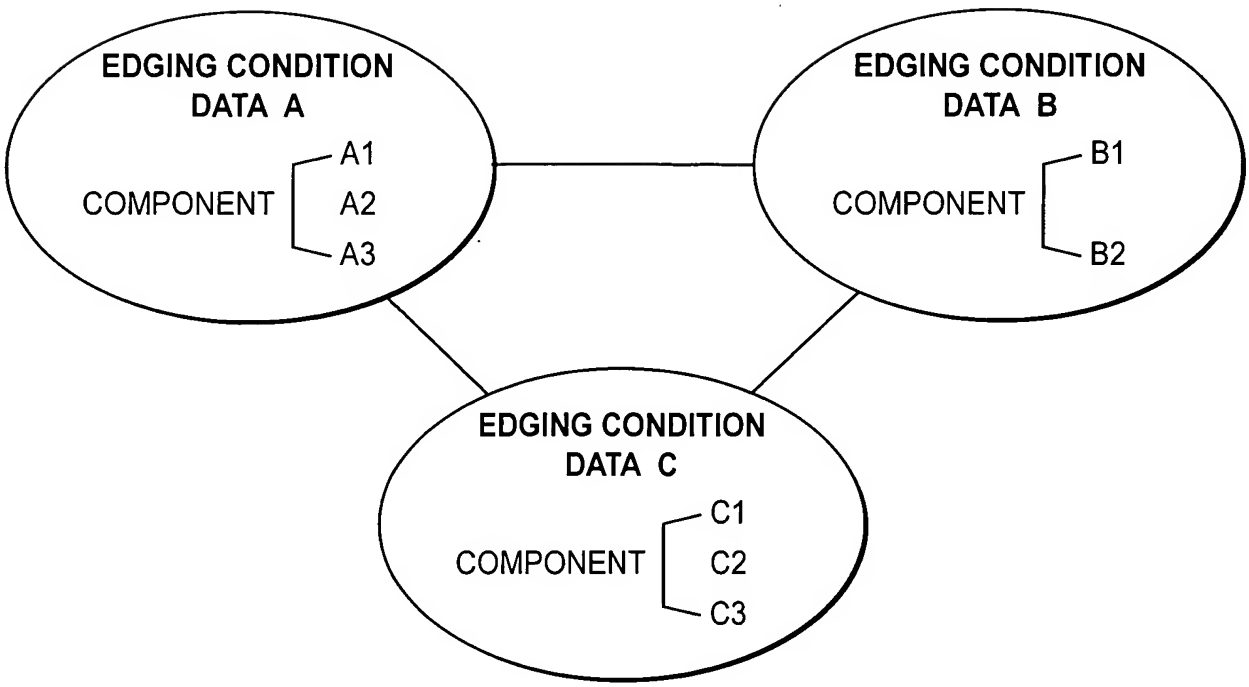

50
25
0
-25
-50
A
B
B
A
A: PASS/FAIL LINE FOR SHIPPING STANDARD
B: PASS/FAIL LINE ON THE SOFTWARE
CIRCUMFERENCE DIFFERENCE

FIG. 8



EDGING CONDITION NO.1: A1 AND B1 AND C1

EDGING CONDITION NO.2: A1 AND B1 AND C2

EDGING CONDITION NO.3: A1 AND B1 AND C3

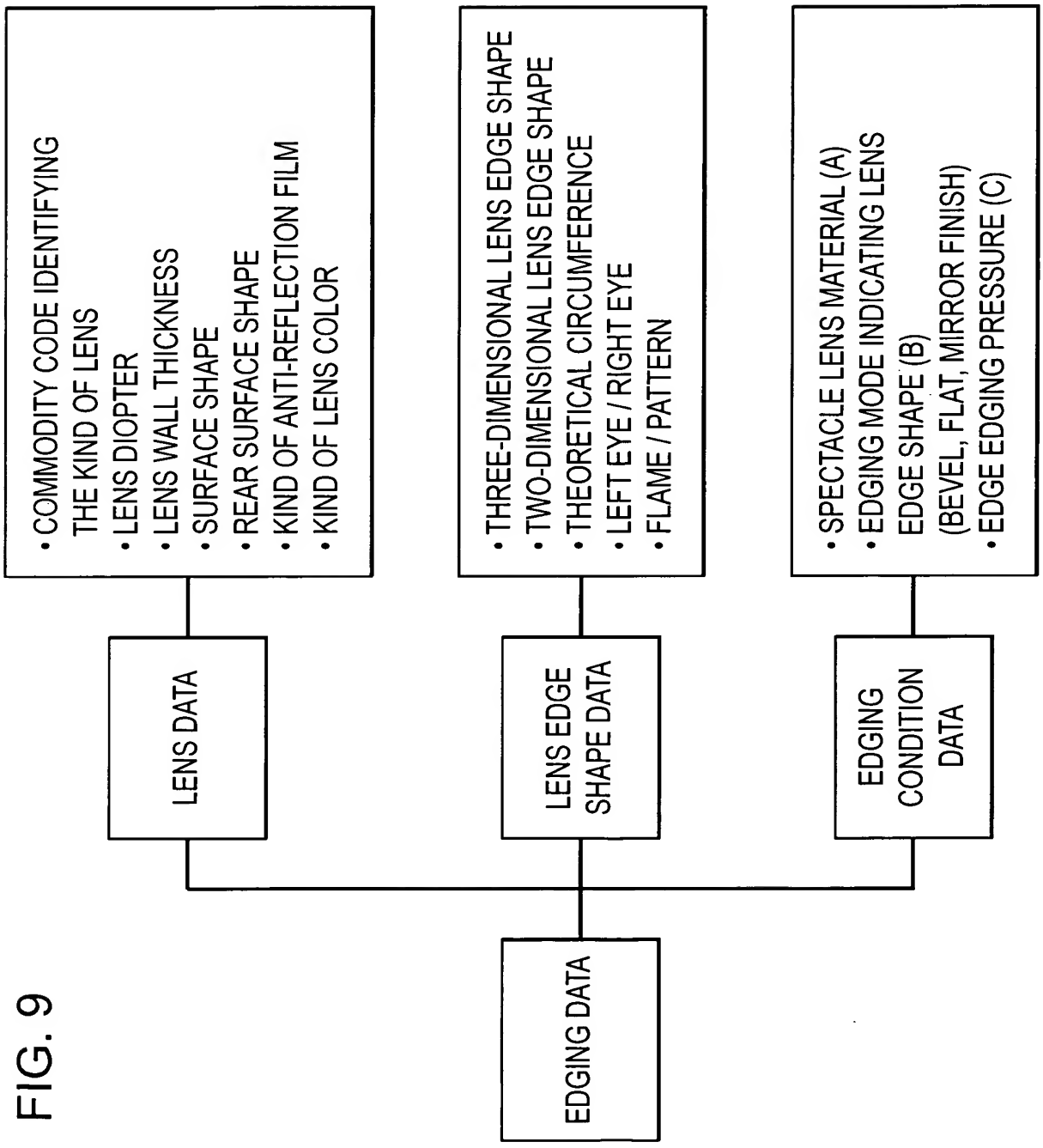
•
•

EDGING CONDITION NO.X: A2 AND B2 AND C1

•
•
•

EDGING CONDITION NO.18: A3 AND B3 AND C3

FIG. 9


EDGING DATA
LENS DATA
• COMMODITY CODE IDENTIFYING THE KIND OF LENS
• LENS DIOPTER
• LENS WALL THICKNESS
• SURFACE SHAPE
• REAR SURFACE SHAPE
• KIND OF ANTI-REFLECTION FILM
• KIND OF LENS COLOR
LENS EDGE SHAPE DATA
• THREE-DIMENSIONAL LENS EDGE SHAPE
• TWO-DIMENSIONAL LENS EDGE SHAPE
• THEORETICAL CIRCUMFERENCE
• LEFT EYE / RIGHT EYE
• FLAME / PATTERN
EDGING CONDITION DATA
• SPECTACLE LENS MATERIAL (A)
• EDGING MODE INDICATING LENS EDGE SHAPE (B)
(BEVEL, FLAT, MIRROR FINISH)
• EDGE EDGING PRESSURE (C)